BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Gershoni, Jonathan Michael	Professor of Cell Research and Immunology
eRA COMMONS USER NAME	
gershoni	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Hebrew University of Jerusalem	BSc	1975	Biology
Hebrew University of Jerusalem	PhD	1980	Biochemistry

A. Positions and Honors.

Positions and Employment

1980-1983	Research Associate, Yale University School of Medicine, New Haven CT
1983-1985	Research Fellow, Dept. Biophysics, Weizmann Institute of Science, Rehovot, Israel
1985-1987	Senior Scientist, Dept. Biophysics, Weizmann Institute of Science, Rehovot, Israel
1987-1990	Associate Professor, Dept. Biophysics, Weizmann Institute of Science, Rehovot, Israel
1988-1990	Visiting Scientist, Laboratory of Tumor Cell Biology, NCI NIH, Bethesda MD
1990-1998	Associate Professor, Dept. Cell Research & Immunology, Tel Aviv Univ., Tel Aviv, Israel
1995-Date	Tenure, Dept. Cell Research & Immunology, Tel Aviv University, Tel Aviv, Israel
1998-Date	Professor, Dept. Cell Research & Immunology, Tel Aviv University, Tel Aviv, Israel
2006-Date	Adjunct Professor, Dept. of Physics, Boston University, Boston MA

Other Experience and Professional Memberships

1986 - 2004	Editorial Board - Analytical Biochemistry
1993 - 1997	Chairman - Faculty curriculum committee
1997 - 1998	Acting CEO - International BioImmune Systems, NY
2001 - 2004	Chairman - Faculty curriculum committee
2001 - 2008	Scientific Advisory Board - Novartis Foundation
2002 - 2004	Director - Laura Schwarz-Kipp Institute of Biotechnology
2002 - 2004	Chairman - Board of Directors, Israel AIDS Task Force
2003 - 2006	Chairman - Department of Cell Research and Immunology

Honors

1980-1982	The Chaim Weizmann Postdoctoral Fellowship
1983-1984	The Batsheva De Rothschild Fellowship
1985	Short-term EMBO Fellowship
1985-1988	The Yigal Alon Fellowship
2000	Tel Aviv University Rector's Prize – Outstanding Teacher of the Year
2008	Incumbent of the David Furman chair in Immunobiology of Cancer

Selected peer-reviewed publications (in chronological order).

1. **Gershoni J.M.,** G.E. Palade. 1983 Protein blotting: principles and applications. *Anal. Biochem*. 131:1-15
2. **Gershoni, J.M.,** G. Denisova, D. Raviv, N.I. Smorodinsky, D. Buyaner 1993 HIV binding to its receptor creates specific epitopes for the CD4/gp120 complex. *FASEB J*. 7:1185-1187.
3. Ophir, R., **J.M. Gershoni** 1995 Biased random mutagenesis of peptides: determination of mutation-frequency by a computer simulation. *Protein Engineering* 8:143-146.
4. Stern, B., G. Denisova, D. Buyaner, D. Raviv, **J.M. Gershoni** 1997 Helical epitopes determined by low-stringency antibody screening of a combinatorial peptide library. *FASEB J*. 11:147-153.
5. **Gershoni, J.M.,** B. Stern, G. Denisova 1997 Combinatorial libraries, epitope structure and the prediction of protein conformations. *Immunology Today*. 18:108-110.
6. Kantor, R., **J.M. Gershoni** 1999 Distribution of the CCR5-gene 32 basepair deletion in Israeli ethnic groups. *J. AIDS*. 20:81-84.

7. Denisova, G., M. Zerwanizer, D.A. Denisov, E. Spectorman, I. Mondor, Q. Sattentau, **J.M. Gershoni** 2000 Expansion of epitope cross-reactivity by anti-idiotype modulation of the primary humoral response. *Mol. Immunol.* 37:53-58.
8. Enshell-Seijffers, D., L. Smelyanski, **J.M. Gershoni** 2001 The rational design of a "type88" genetically stable peptide display vector in the filamentous bacteriophage fd. *Nuc Acid Res* 29:e50 [<http://nar.oupjournals.org/cgi/content/full/29/10/e50?ijkey=jxx1afczsHlbU&keytype=ref&siteid=nar>]
9. Enshell- Seijffers, D., L. Smelyanski, N. Vardinon, I. Yust, **J.M. Gershoni** 2001 Dissection of the humoral response towards an HIV epitope: a model for the analysis of antibody diversity in HIV+ individuals. *FASEB J* 15:2112-2120
10. Denisova G., L. Lideman, E. Spectorman, R. Abulafia-Lapid, M. Burke, I. Yust, **J.M. Gershoni** 2003 Characterization of new monoclonal antibodies that discriminate between soluble and membrane CD4 and compete with human anti-CD4 autoimmune sera. *Mol. Immunol* 40:231-239
11. Enshell-Seijffers D., D. Denisov, L. Smelyanski, R. Meyuhas, G. Gross, G. Denisova, **J.M. Gershoni** 2003 The mapping and reconstitution of a conformational discontinuous B-cell epitope of HIV-1. *J Mol Biol.* 334:87-101
12. Meyuhas R., H. Noy, D.C. Montefiori, G. Denisova, J.M. **Gershoni**, G. Gross 2005 HIV-1 neutralization by chimeric CD4-CG10 polypeptides fucsed to human IgG1. *Mol. Immunol* 42:1099-1109
13. Siman-Tov, D.D., L. Perry-Navon, N.L. Haigwood, **J.M. Gershoni** 2006 Differentiation of a passive vaccine and the humoral immune response toward infection: analysis of phage displayed peptides. *Vaccine.* 24:607-612.
14. Tarnovitski, N., L. J. Matthews, J. Sui, **J.M. Gershoni**, W. A. Marasco 2006 Mapping a neutralizing epitope on the SARS Coronavirus spike protein: computational prediction based on affinity-selected peptides. *J Mol Biol.* 359:190-201
15. Bublil, E. M., S. Yeger-Azuz, **J.M. Gershoni** 2006 Computational prediction of the cross-reactive neutralizing epitope corresponding to the monoclonal antibody b12 specific for HIV-1 gp120. *FASEB J* 20:1762-1774
16. Mayrose I., T. Shlomi, N. D. Rubinstein, **J.M. Gershoni**, E. Ruppin, R. Sharan, T. Pupko 2007 Epitope mapping using combinatorial phage-display libraries: a graph-based algorithm. *Nuc Acid Res* 35:69-78
17. Bublil, E.M., N. Tarnovitski Freund, I. Mayrose, O. Penn, A. Roitburd-Berman, N.D. Rubinstein, T. Pupko, **J.M. Gershoni** 2007 Stepwise prediction of conformational discontinuous B-cell epitopes using the Mapitope alghorithm. *Proteins* 68:294-304
18. **Gershoni J.M.**, A. Roitburd-Berman, D.D. Siman-Tov, N. Tarnovitski Freund, Y. Weiss 2007 Epitope mapping: the first step in developing epitope-based vaccines. *BioDrugs* 21:1-12
19. Kantor R., **J.M. Gershoni** 2007 HIV/AIDS and the genetic revolution – custom tailoring antiretroviral regimens in the management of HIV. *Int. J. Healthcare Technology and Management* 8:478-491
20. Mayrose, I, O. Penn, E. Erez, ND Rubinstein, T Shlomi, N Tarnovitski Freund, EM Bublil, R Sharan, **J.M. Gershoni**, E Martz, T Pupko 2007 Pepitope: Epitope mapping from affinity-selected peptides. *Bioinformatics* 23:3244-3246 (<http://pepitope.tau.ac.il/>)
21. Rubinstein, N.D., I. Mayrose, D. Halperin, D. Yekutieli, **J.M. Gerhsoni**, T. Pupko 2008 Computational characterization of B-Cell epitopes. *Mol. Immunol.* 45:3477-3489
22. Ozukumar E., J.W. Needham, D.A. Bergstein, R. Gonzalez, M Cabodi, **J.M. Gershoni**, B.B. Goldberg and M.S. Unlu 2008 Label-free and dynamic detection of biomolecular interactions for high-throughput microarray applications. *Proc. Natl. Acad. Sci USA* 105:7988-7992
23. **Gershoni J.M.** 2008 Molecular Decoys: antidotes, therapeutics and immunomodulators. *Curr Opin Biotechnol* 19:644-651.
24. Bergstein D.A., E. Ozkumur, A.C. Wu, A. Yalcin, J.R. Colson, J.W. Needham, R.H. Irani, **J.M. Gershoni**, B.B. Goldberg, C. DeLisi, M.F. Ruane, M.S. Unlu 2008 Resonant cavity imaging: a meanst toward high-thoughput label-free protein detection. *IEEE J Sel. Top Quant Elec.* 14:131-139

Patents
1. Charge modified nylon - U.S. patent #4,512,896, April 23, 1985; Canadian patent #1,207,737, July 15, 1986; U.S. patent #4,601,828, July 22, 1986.
2. Gradient electric field - U.S. patent #4,541,910, September 17, 1985.
3. Enzyme hydrazides - Israeli patent #71947, January 31, 1988.
4. Molecular decoys - European Patent #0329778B1, May 31, 1995; US Patent #5,770,572, June 23, 1998,

5. Complex vaccines – U.S. Patent #5,925,741 July 20, 1999, U.S. Patent #6,020,468, Feb. 1, 2000, U.S. Patent #6,143,876 Nov. 7, 2000, U.S. Patent #6,329,202 Dec 11, 2002, U.S. Patent #6,410,318 June 25, 2002, US Patent #6,812,026 B2 Nov. 2, 2004
6. Combinatorial scrambled vaccines - PCT # WO 98/20169, May 14, 1998. US Patent allowed.
7. Phage display 2 hybrid systems – U.S. Patent #6,165,722, Dec 26, 2000
8. Breast cancer vaccine - patent pending.
9. Bio-Chip diagnostics – US Patent # 6,465,241 B2 Oct. 15, 2002.
10. Phage display vector system – patent pending.
11. Prediction of conformational discontinuous epitopes – PCT #WO 2005/026379 A2.
12. Diagnosis of Tuberculosis – patent pending.